

REMARKS

The Office Action of January 31, 2011, has been carefully studied. Including withdrawn claims, claims 1-20, 24, 27-35 and 39-46 currently appear in this application. Three claims have been canceled and three claims have been added by this amendment. Therefore, this amendment does not increase the total number of claims. The pending claims define novel and unobvious subject matter under Sections 102 and 103 of 35 U.S.C., and therefore should be allowed. Applicant respectfully requests favorable reconsideration and formal allowance of the claims.

Claim Amendments

All of the claims have been amended to now be directed to a device composed of a substrate and a film coating, the coating comprising the claimed quasi-amorphous pyroelectric compound. Each of the independent claims has been further amended to specify that the compound has a pyroelectric vector whose direction cannot be changed or reversed. Support for these amendments will be found at least in original claim 25 and in the present specification, for example at page 13, lines 19-24. Both of these added limitations clearly distinguish the present invention over MacKenzie.

Also submitted herewith is a declaration under 37 CFR §1.132 providing evidence that the compound according to the present invention possesses properties different than those of the materials disclosed by MacKenzie, which means that the compounds according to the invention must differ physically from those disclosed by MacKenzie.

The distinctly different properties of compounds according to the present invention derive from differences between the invention and MacKenzie with regard to the form of the starting material and the manner in which the starting material is treated to form the resulting final compound. In particular, the present invention starts with a film coating on a substrate, while the MacKenzie technique starts with a powder of ferroelectric amorphous materials.

Treatment according to the present invention involves the application of a mechanical strain in a manner distinctly different from the treatment procedure disclosed by MacKenzie. Claim 42 of the present application provides a detailed recitation of the treatment procedure according to the invention.

The result of these differences between the present invention and MacKenzie is that the compound according to the present invention has a

pyroelectric vector whose direction cannot be changed or reversed. What this means, as explained in the attached declaration, is that the direction of polarization of the compound cannot be changed or reversed. This is now specifically defined in each of the independent claims and disclosed in the present specification, for example at page 13, lines 19-24.

In clear contrast, the materials disclosed by MacKenzie do undergo a change in polarization direction in the presence of an electric field, as clearly illustrated in figure 1 and described at column 7, lines 47-66.

Thus, all of the appending claims now define a device that differs physically from that disclosed by MacKenzie. These physical differences are responsible for the different behavior characteristics of devices according to the present invention.

Accordingly, the rejection presented in section 5 of the action is traversed. It is noted that this rejection has been made under 35 U.S.C §102 and, in the alternative, under 35 U.S.C §103. However, the rejection under 35 U.S.C §103 appears to be directed only to the process limitations presented in the claims.

Since each of the claims now defines a physical characteristic that is clearly not possessed by the materials disclosed by MacKenzie, the rejection under both 35 U.S.C §102 and 35 U.S.C §103 must be withdrawn.

In addition, since all of the claims that have been withdrawn from consideration are dependent claims, it is asked that, upon allowance of the claims that are being examined, the restriction requirement be withdrawn and claims 2, 3, 6 and 38-40 be rejoined with the claims being examined.

In view of the foregoing, it is requested that the rejections presented in the last action be reconsidered and withdrawn, that the restriction requirement be withdrawn, that all of the pending be allowed and that the application be found in allowable condition.

Favorable reconsideration and prompt allowance are earnestly solicited. Should the Examiner believe that any further steps should be taken in order to facilitate allowance; the Examiner is welcome to contact the undersigned attorney at the below-listed number and address.

Respectfully submitted,

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